

Characterization of *Lasiodiplodia theobromae* and *L. pseudotheobromae* causing fruit rot on pre-harvest mango in Malaysia

ABSTRACT

Lasiodiplodia species are important plant pathogens in mango production countries, infecting plants during both pre- and post- harvest phases. Fruit rot reduces mango production and creates tremendous losses in economy of the involved countries. Fungal isolation was conducted in eight locations throughout Peninsular Malaysia. Species identification was based on morphological characterisation and internal transcribed spacer (ITS) and β -tubulin (BT2) gene sequences analysis. Twenty isolates were obtained and identified as *Lasiodiplodia theobromae* (17isolates) and *L. pseudotheobromae* (3 isolates). Phylogenetic analysis using maximum-likelihood method demonstrated that all isolates of *L. theobromae* and *L. pseudotheobromae* formed a monophyletic clade. In pathogenicity tests, most fungal isolates inoculated on mango fruit showed fruit rot symptom. The most virulent isolate was *L. theobromae* A1718 with disease severity index (DSI)of 87.5%.

Keyword: β -tubulin (BT2); Internal transcribed spacer (ITS); *Lasiodiplodia*; Mango